

CLAIMS

What is claimed is:

1. An optical disc, comprising:

a clamping area;

a lead-in area;

a data area; and

a burst cutting area (BCA) between the clamping area and the lead-in area and in which information regarding the optical disc is recorded, wherein the information is read before performing tracking in the data area.

2. The optical disc as recited in claim 1, wherein the information regarding the optical disc is at least one of tracking polarity information and reflectivity information.

3. The optical disc as recited in claim 2, wherein the tracking polarity information and the reflectivity information are recorded with a pattern of crystalline or non-crystalline marks.

4. The optical disc as recited in claim 2, wherein the recording of the tracking polarity information begins at leading bytes in the BCA.

5. The optical disc as recited in claim 4, wherein the tracking polarity information is repeatedly recorded.

6. The optical disc as recited in claim 4, wherein the first two bits of the leading bytes of the tracking polarity information comprise identifiers of the respective tracking polarity information that is repeatedly recorded several times, and the other six bits comprise remaining information of the tracking polarity information.

7. The optical disc as recited in claim 6, wherein one of the six bits comprise flag information that indicates whether other information is recorded in the BCA.

8. The optical disc as recited in claim 7, wherein the other five bits of the six bits comprise the tracking polarity information that indicates a polarity of a tracking signal related to

each recording layer of the optical disc.

9. The optical disc as recited in claim 1, wherein the clamping area, the lead-in area, and the data area are formed in each recording layer of the optical disc.

10. The optical disc as recited in claim 6, wherein first two bits  $b1b0$  of the tracking polarity information are identifiers of the information that are repeatedly recorded, where if the first two bits  $b1b0$  are 00, the information indicates that first tracking polarity information is recorded in the BCA, if the first two bits  $b1b0$  are 01, the information indicates that second tracking polarity information is recorded in the BCA, if the first two bits  $b1b0$  are 10, the information indicates that third tracking polarity information is recorded in the BCA, or if the first two bits  $b1b0$  are 11, the information indicates that fourth tracking polarity information is recorded in the BCA.

11. An optical disc, comprising:

a first recording layer in which a first lead-in area, a first data area, and a first lead-out area are formed; and

a second recording layer in which a second lead-in area, a second data area, and a second lead-out area are formed,

wherein at least one of the first and second recording layers comprise a burst cutting area (BCA) in which information regarding the optical disc is recorded, and the information is read before performing tracking in the first and second data areas.

12. The optical disc as recited in claim 11, wherein the information regarding the optical disc is at least one of tracking polarity information and reflectivity information.

13. The optical disc as recited in claim 12, wherein the tracking polarity information and the reflectivity information are recorded with a pattern of crystalline or non-crystalline marks.

14. The optical disc as recited in claim 13, wherein the recording of the tracking polarity information begins in leading bytes in the BCA.

15. The optical disc as recited in claim 14, wherein the tracking polarity information is repeatedly recorded.

16. The optical disc as recited in claim 11, wherein first two bits  $b1b0$  of the tracking polarity information are identifiers of the information that are repeatedly recorded, where if the first two bits  $b1b0$  are 00, the information indicates that first tracking polarity information is recorded in the BCA, if the first two bits  $b1b0$  are 01, the information indicates that second tracking polarity information is recorded in the BCA, if the first two bits  $b1b0$  are 10, the information indicates that third tracking polarity information is recorded in the BCA, or if the first two bits  $b1b0$  are 11, the information indicates that fourth tracking polarity information is recorded in the BCA.

17. A method of recording information on an optical disc comprising at least one recording layer, the method comprising:

recording at least one of tracking polarity information and reflectivity information in a burst cutting area (BCA) of the recording layer.

18. A method of reproducing information on an optical disc which has at least one recording layer, the method comprising:

reading tracking polarity information in a burst cutting area (BCA) of the recording layer; and

analyzing the read tracking polarity information, outputting an analysis result indicative thereof, performing tracking in the recording layer of the optical disc using the analysis result, and recording and/or reproducing user data on the optical disc.

19. A method of reproducing information on an optical disc which has at least one recording layer, the method comprising:

reading reflectivity information in a burst cutting area (BCA) of the recording layer; and

analyzing the read reflectivity information, outputting an analysis result indicative thereof, adjusting the write or read power of a laser beam using the analysis result, and recording or reproducing user data on the optical disc.

20. An optical disc recording apparatus, comprising:

a controller creating at least one of tracking polarity information and reflectivity information; and

a recording unit recording the at least one of tracking information and reflectivity information created by the controller in a burst cutting area (BCA) of an optical disc.

21. An optical disc reproducing apparatus, comprising:
  - a reading unit reading at least one of tracking polarity information and reflectivity information from a burst cutting area (BCA) of an optical disc; and
  - a controller analyzing the information read by the reading unit and outputting an analysis result indicative thereof, and recording or reproducing user data on the optical disc using the analysis result.
22. An optical disc, comprising:
  - a first recording layer formed on the optical disc;
  - a second recording layer formed on the optical disc, wherein the first recording layer and a second recording layer each comprise a clamping area, a burst cutting area (BCA), a lead-in area, and a lead-out area, wherein the clamping area is an area that is pressurized to clamp the optical disc, and the BCA is an area in which tracking polarity information and/or reflectivity information is recorded; and
  - a data area recording user data between the lead-in area and the lead-out area.
23. The optical disc as recited in claim 22, wherein the first recording layer is formed of a phase change material (PCM) and the tracking polarity information and/or the reflectivity information is recorded with a pattern of crystalline and/or non-crystalline marks.
24. The optical disc as recited in claim 22, wherein the second recording layer is formed of a phase change material (PCM) and the tracking polarity information and/or the reflectivity information is recorded with a pattern of crystalline and/or non-crystalline marks.
25. The optical disc as recited in claim 22, wherein the clamping area is circular band shaped and formed in an inner portion of the optical disc.
26. The optical disc as recited in claim 22, wherein a serial number and manufacturing date corresponding to the optical disc are recorded in the BCA.

27. The optical disc as recited in claim 22, wherein the BCA *B* is formed on the first recording layer.

28. The optical disc as recited in claim 22, wherein the BCA *B* is formed on the second recording layer.

29. The optical disc as recited in claim 22, wherein first two bits  $b1b0$  of the tracking polarity information are identifiers of the information that are repeatedly recorded, where if the first two bits  $b1b0$  are 00, the information indicates that first tracking polarity information is recorded in the BCA, if the first two bits  $b1b0$  are 01, the information indicates that second tracking polarity information is recorded in the BCA, if the first two bits  $b1b0$  are 10, the information indicates that third tracking polarity information is recorded in the BCA, or if the first two bits  $b1b0$  are 11, the information indicates that fourth tracking polarity information is recorded in the BCA.